

IN THE CLAIMS:

Claims 1 to 19 were previously cancelled.

20. (CURRENTLY AMENDED) A catheter for intravascular corporeal cooling comprising:

an elongated tubular member having proximal and distal sections, an outer surface, and at least one lumen extending therethrough, and

annular insulation having proximal and distal ends and arranged concentrically around the outer surface of the elongated external tubular member,

wherein at least one lumen in the tubular member can provide externally cooled blood in the direction of the distal section of the elongated tubular member and externally cooled blood flowing through one or more lumens within the elongated tubular member is insulated from fluid or tissue external to the annular insulation to maintain the temperature of the cooled blood.

21. (PREVIOUSLY AMENDED) The catheter of Claim 20, wherein the annular insulation extends over substantially the entire outer surface of the elongated tubular member.

22. (ORIGINAL) The catheter of Claim 20, wherein the distal end of the annular insulation is tapered.

23. (ORIGINAL) The catheter of Claim 20, wherein the annular insulation extends for from about 50 to 80% of the total length of the elongated tubular member.

24. (ORIGINAL) The catheter of Claim 20, wherein the annular insulation comprises a fluid-filled tubular member.

25. (ORIGINAL) The catheter of Claim 24, wherein the fluid is water or saline solution.

26. (ORIGINAL) The catheter of Claim 24, wherein the fluid is a gas.

27. (ORIGINAL) The catheter of Claim 20, wherein the annular insulation comprises a tubular member filled with insulative material.

28. (ORIGINAL) The catheter of Claim 27, wherein the insulative material is a synthetic polymeric fill.

29. (ORIGINAL) The catheter of Claim 20 which also comprises a pressure sensor at or adjacent to the distal end of the catheter.

30. (PREVIOUSLY AMENDED) The catheter of Claim 20 which is adapted to be useful for brain cooling.

31. (ORIGINAL) The catheter of Claim 20, wherein at least one lumen is in fluid communication with a source of cooled blood.

32. (ORIGINAL) The catheter of Claim 20, wherein at least one lumen is in fluid communication with a liquid pharmaceutical source.

Claims 33 to 46 were previously cancelled.

47. (CURRENTLY AMENDED) A catheter for corporeal cooling and maintaining the temperature of fluid flowing through the catheter, comprising:

an elongated tubular member having proximal and distal sections, an outer surface, and at least one lumen extending therethrough, and

annular insulation having proximal and distal ends and arranged concentrically around the outer surface of the elongated external tubular member,

wherein externally cooled blood flowing through one or more lumens within the elongated tubular member is insulated from fluid or tissue external to the annular insulation so that the temperature of the cooled blood is substantially unchanged as it flows through the catheter.

48. (CURRENTLY AMENDED) An insulated catheter for maintaining the temperature of fluid flowing through the catheter, comprising:

an elongated tubular member having proximal and distal sections, an outer surface, and at least one lumen extending therethrough, and

annular insulation having proximal and distal ends and arranged concentrically around the outer surface of the elongated external tubular member,

wherein fluid flowing through one or more lumens within the elongated tubular member is insulated from fluid or tissue external to the annular insulation so that the temperature of the fluid is substantially unchanged as it flows through the catheter.

49. (PREVIOUSLY ADDED) The catheter of Claim 47 or 48, wherein the annular insulation extends over substantially the entire outer surface of the elongated tubular member.

50. (PREVIOUSLY ADDED) The catheter of Claim 47 or 48, wherein the annular insulation comprises a tubular member filled with insulative material.

51. (PREVIOUSLY ADDED) The catheter of Claim 50, wherein the insulative material is a synthetic polymeric fill.

52. (PREVIOUSLY ADDED) The catheter of Claim 47 or 48 which also comprises a pressure sensor at or adjacent to the distal end of the catheter.

53. (PREVIOUSLY ADDED) The catheter of Claim 47 or 48, wherein at least one lumen is in fluid communication with a source of cooled blood.